



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

52

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

09/748,992

12/27/2000

Scott W. Weller

D/A0A49

6350

7590

05/04/2005

John E. Beck
Xerox Corporation
Xerox Square 20A
Rochester, NY 14644

EXAMINER

KHOSHNOODI, NADIA

ART UNIT

PAPER NUMBER

2133

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/748,992

Applicant(s)

WELLER, SCOTT W.

Examiner

Nadia Khoshnoodi

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-13 and 15-22 is/are pending in the application.
- 4a) Of the above claim(s) 2, 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-13, 15-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment

Claims 2 and 14 are cancelled. Applicant's arguments/amendments with respect to amended claims 1, 3-4, 12-13, and 15, previously presented claims 5-11 and 14, and new claims 16-22 filed September 10, 2004 have been fully considered and therefore the claims are rejected under new grounds.

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show elements 30, 36, and 46 in Fig. 3 as described in the specification. Please ensure that all references made to the figure elements in the specification are correctly depicted in the figures. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet"

Art Unit: 2133

or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

I. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

II. Claims 1, 3-4, 5-6, 12-13, rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al., United States Patent No. 5,633,932 and further in view of Merkle et al., European Pub No. 0547837.

As per claims 1 and 12

Davis et al. substantially teach a method/system of printing an electronic document, the method comprising: in a printing apparatus, electronically verifying predetermined authentication information in the electronic document (col. 6, lines 33-48); and If the verifying step confirms the predetermined authentication information, the printing apparatus automatically performs a first print function comprising printing on a print medium the electronic document (col. 6, lines 41-48); and if the verifying step does not confirm the predetermined authentication information, the printing apparatus automatically performs a second print function (col. 5, lines 21-24 and fig. 3, step 350).

Not explicitly disclosed by Davis et al. is the printing apparatus automatically performs a first print function comprising printing on a print medium the electronic document with an authentication mark. However, Merkle et al. teach the need for an authentication mark to be present on the hard copy of the electronic document, or the electronic document printed on the print medium. Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method/system disclosed in Davis et al. to also print the authentication mark with the electronic document. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, would have been motivated to do so since it is suggested by Merkle et al. in col. 2, lines 1-24.

As per claim 3 and 13:

Davis et al. and Merkle et al. substantially teach the method/system as applied to claims 1 and 12 above. Further, Merkle et al. teaches the method wherein the step of printing the electronic document with an authentication mark comprises printing a predetermined authentication mark corresponding to the authentication information in the document (col. 2, lines 18-24).

As per claims 4 and 15:

Davis et al. and Merkle et al. substantially teach the method/system as applied to claims 3 and 13 above. Furthermore, Davis et al. teach that the verifying step comprises confirming if the authentication information includes information indicating a first source or information indicating a second source (col. 6, lines 38-49). Not explicitly disclosed by Davis et al. or Merkle et al. is the method wherein the step of printing a predetermined authentication mark comprises printing on the print medium a first authentication mark if the authentication information

Art Unit: 2133

indicates the first source, or printing on the print medium a second authentication mark if the authentication information indicates the second source.

However, Merkle et al. teach the method of each original document having a digital signature of the entire document. This implies that the digital signature of one document would then be distinguishable from the digital signature of another document, thereby yielding a first and a second authentication mark. Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method/system disclosed in Davis et al. and Merkle et al. to print a first authentication mark corresponding to a first source and print a second mark corresponding to a second source. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, would have been motivated to do so since it is suggested by Merkle et al. in col. 1, lines 14-24.

As per claim 5:

Davis et al. and Merkle et al. substantially teach the method as applied to claim 1 above. Furthermore, Merkle et al. teach the method, wherein the step of verifying predetermined authentication information comprises applying to the electronic document a cipher (col. 1, lines 14-24).

As per claim 6:

Davis et al. and Merkle et al. substantially teach the method as applied to claim 5 above. Furthermore, Merkle et al. teach the method wherein the step of applying to the electronic document a cipher comprises the steps of applying to a first portion of the electronic document an asymmetric cipher to create a first received message digest; and applying to a second portion of the electronic document a digest algorithm to obtain a second received message digest; and

Art Unit: 2133

the step of verifying additionally comprises comparing the first and second received message digests for a match (col. 1, lines 14-42, col. 3, lines 35-45, and col. 4, lines 25-54).

Not explicitly disclosed by Davis et al. or Merkle et al. is the method wherein the printing apparatus automatically performs the first print function if the first and second received message digests match. However, Davis et al. teach that the information submitted for authentication must be valid in order to perform the first printing function. Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed in Davis et al. and Merkle et al. to check to ensure that the first and second received message digests match in order to authenticate and allow printing. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, would have been motivated to do so since it is suggested by Davis et al. in col. 6, lines 38-49. As per claim 9:

Davis et al. substantially teaches in a printing apparatus, a method of printing a document, the method comprising: storing on the printing apparatus one or more verification algorithms (col. 6, lines 33-48); receiving at the printing apparatus an electronic document (col. 6, lines 33-48); applying to at least a portion of the electronic document received at the printing apparatus a first one of the one or more verification algorithms to authenticate the electronic document (col. 6, lines 33-48); and automatically printing on the printing apparatus the document (col. 6, lines 41-48).

Not explicitly disclosed by Davis et al. is the printing apparatus automatically performs a printing on a print medium the electronic document with a first authentication mark if the step of applying the first verification algorithm authenticates the electronic document. However, Merkle

Art Unit: 2133

et al. teach the need for an authentication mark to be present on the hard copy of the electronic document, or the electronic document printed on the print medium. Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed in Davis et al. to also print the authentication mark with the electronic document. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, would have been motivated to do so since it is suggested by Merkle et al. in col. 2, lines 1-24.

As per claim 10:

Davis et al. and Merkle et al. substantially teach the method as applied to claim 9 above. Furthermore Merkle et al. teach the method wherein the step of storing on the printing apparatus verification algorithms comprises storing first and second verification algorithms, and the method additionally comprises the steps of: applying to at least a portion of the electronic document received at the printing apparatus the second verification algorithm; and automatically printing on the printing apparatus the document with a second authentication mark if the step of applying the second verification algorithm authenticates the electronic document (col. 1, lines 14-42, col. 2, lines 39-58, and col. 3, lines 1-45). Although the terms first or second “verification algorithms” are not explicitly used, it is inherent that the verification algorithms are based off of the how the digital signature was created. Since the digital signature is created based off of the electronic document and there exist more than one document, there must be more than one way to verify those signatures, hence there must be more than one verification algorithm.

As per claim 11:

Davis et al. and Merkle et al. substantially teach the method of claim 10. Furthermore

Merkle et al. teach the method wherein the step of printing the document with a first/second authentication mark comprises marking a print media with ink to form on the print media an image corresponding to the electronic document and the first/second authentication mark (col. 9, lines 47-53).

As per claim 16:

Davis et al. and Merkle et al. substantially teach the method as applied to claim 1 above. Furthermore, Davis teaches the method, wherein the second print function does not include printing on a print medium the authentication mark (fig. 3, step 350).

As per claims 17 and 20:

Davis et al. and Merkle et al. substantially teach the method/system as applied to claim 1 above. Not explicitly disclosed by Davis et al. or Merkle et al. is the method, wherein the second print function comprises applying printing on a print medium the electronic document without the authentication mark. However, Davis et al. teach that the electronic document could be printed without an authentication mark. Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method/system disclosed in Davis et al. and Merkle et al. to allow printing the electronic document without an authentication mark for example when the printing type is for a normal document. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, would have been motivated to do so since it is suggested by Davis et al. in col. 6, lines 33-37.

As per claims 18 and 21:

Davis et al. and Merkle et al. substantially teach the method/system as applied to claim 1 above. Not explicitly disclosed by Davis et al. or Merkle et al. is the method wherein the second

print function comprises printing on a print medium the electronic document with a visible indication that the predetermined authentication information was not confirmed. However, Merkle et al. teach the method of producing a visible message that indicates that the authentication information is invalid. Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method/system disclosed in Davis et al. and Merkle et al. to allow printing the electronic document with the message in order to show that the document printed has been printed in an invalid manner. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, would have been motivated to do so since it is suggested by Merkle et al. in col. 8, lines 13-20. As per claims 19 and 22:

Davis et al. and Merkle et al. substantially teach the method/system as applied to claim 1 above. Furthermore, Merkle et al. teach the method/system wherein the second print function comprises printing on a print medium an error report stating that the predetermined authentication information was not confirmed (col. 8, lines 13-20).

III. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al., United States Patent No. 5,633,932 and Merkle et al., European Pub No. 0547837, and further in view of Gilchrist et al., United States Patent No. 6,167,517.

As per claim 7:

Davis et al. and Merkle et al. substantially teach the method as applied to claim 6 above. Not explicitly disclosed by Davis et al. or Merkle et al. is the method additionally comprising the steps of: if the first and second received message digests do not match, applying to the electronic document a second cipher, the step of applying the second cipher comprising the steps of:

Art Unit: 2133

applying to the first portion of the electronic document a second asymmetric cipher to create a third received message digest; and applying to the second portion of the electronic document a second digest algorithm to obtain a fourth received message digest; and the step of verifying additionally comprises comparing the third and fourth received message digests for a match, and wherein the printing apparatus automatically performs the first print function if the third and fourth received message digests match.

However, Gilchrist et al. teach the method where a third message digest is created from another portion in the case that an error may have occurred in obtaining the authentication data. Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed in Davis et al. and Merkle et al. to derive third and fourth received message digests in order to improve the authentication system's validity in authenticating only those documents that should be authenticated and to lessen the possibility that an error occurred. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, would have been motivated to do so since it is suggested by Gilchrist et al. in col. 6, lines 30-65.

As per claim 8:

Davis et al., Merkle et al., and Gilchrist et al. substantially teach the method as applied to claim 7 above. Not explicitly disclosed by Davis et al., Merkle et al., or Gilchrist et al., is the method wherein: the first print function comprises, printing the document with a first authenticity mark if the step of comparing the first and second received message digests produces a match; and the first print function comprises printing the document with a second authenticity mark if the step of comparing the third and fourth received message digests produces a match.

However, Merkle et al. teaches printing the electronic document authentication mark associated with the authentication information used in order to verify that the document should be printed. Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed in Davis et al., Merkle et al., and Gilchrist et al. to print a first authentication mark associated with the first and second message digests and a second authentication mark associated with using the third or fourth message digests. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, would have been motivated to do so since it is suggested by Merkle et al. in col. 1, lines 14-42, col. 2, lines 39-58, and col. 3, lines 1-45.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nadia Khoshnoodi whose telephone number is (571) 272-3825. The examiner can normally be reached on M-F: 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2133

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Nadia Khoshnoodi
Examiner
Art Unit 2133
4/26/2005

NK



GUY LAMARRE
PRIMARY EXAMINER